

Amendments to the Claims

Please cancel Claims 2 and 5 without prejudice to or disclaimer of the subject matter recited therein.

Please amend Claims 1, 3, 4, 6, 7 and 9-23 to read as follows.

1. (Currently Amended) A liquid discharge apparatus for discharging a liquid to a medium using a liquid discharge head having a plurality of nozzles for discharging the liquid, comprising:

a discharge amount changing device which can change the amounts of liquid discharged from the respective nozzles of the liquid discharge head independently of ~~each of said other nozzles of the~~ plurality of nozzles,

said discharge amount changing device including a voltage control device which can change a driving voltage value of a driving pulse to be supplied to each of ~~said~~ the plurality of nozzles,

wherein said discharge amount changing device changes the driving voltage value in accordance with a change in at least one of conditions including a combination of nozzles to be used, the number of nozzles to be used, presence/absence of a faulty nozzle, a direction of relative movement of the head and the medium, and a speed of the relative movement of the head and the medium.

2. (Cancelled)

3. (Currently Amended) A liquid discharge method of discharging a liquid to a medium using a liquid discharge head having a plurality of nozzles for discharging the liquid, comprising:

a step of discharging the liquid from the liquid discharge head which has only nozzles connected to a discharge amount changing device which can change the amount of liquid discharged from ~~the nozzle~~ one of the nozzles by changing a driving voltage value of a driving pulse to be supplied to the nozzle,

wherein, in said discharging step, the discharge amount changing device changes the driving voltage value in accordance with a change in at least one of conditions including a combination of nozzles to be used, the number of nozzles to be used, presence/absence of a faulty nozzle, a direction of relative movement of the head and the medium, and a speed of the relative movement of the head and the medium.

4. (Currently Amended) A display device panel manufacturing apparatus for manufacturing a display device panel by discharging, onto a substrate, liquid from a liquid discharge head having a plurality of nozzles for discharging the liquid, comprising:

a discharge amount changing device which can change the amounts of liquid discharged from the respective nozzles of the liquid discharge head independently of each of said plurality of nozzles,

said discharge amount changing device including a voltage control device which can change a driving voltage value of a driving pulse to be supplied to each of said plurality of nozzles,

wherein said discharge amount changing device changes the driving voltage value in accordance with a change in at least one of conditions including a combination of nozzles to be used, the number of nozzles to be used, presence/absence of a faulty nozzle, a direction of relative movement of the head and the medium, and a speed of the relative movement of the head and the medium.

5. (Cancelled)

6. (Currently Amended) A display device panel manufacturing method of manufacturing a display device panel by discharging, onto a substrate, liquid from a liquid discharge head having a plurality of nozzles for discharging the liquid, wherein a display device panel is manufactured by discharging the liquid from [[a]] the liquid discharge head having only nozzles connected to a discharge amount changing device which can change a driving voltage value of a driving pulse to be supplied to a nozzle, and

wherein, in the discharging operation, the discharge amount changing device changes the driving voltage value in accordance with a change in at least one of conditions including a combination of nozzles to be used, the number of nozzles to be

used, presence/absence of a faulty nozzle, a direction of relative movement of the head and the medium, and a speed of the relative movement of the head and the medium.

7. (Currently Amended) A liquid discharge apparatus including a liquid discharge head having a plurality of nozzles including a predetermined nozzle whose liquid discharge amount can be changed, comprising:

a discharge amount control device which changes a discharge amount control value including at least one of conditions [[of]] including a voltage value and pulse width of a driving pulse to be supplied to [[a]] the predetermined nozzle whose liquid discharge amount can be changed changed, in accordance with a change in a discharging condition for adjacent nozzles adjacent to the predetermined nozzle.

8. (Original) The apparatus according to claim 7, wherein said discharge amount control device changes the discharge amount control value for the predetermined nozzle depending on whether or not the liquid is discharged from the adjacent nozzles at substantially the same timing as a discharge timing of the predetermined nozzle.

9. (Currently Amended) The apparatus according to claim 7, wherein when the predetermined nozzle is a nozzle B, and the adjacent nozzles are nozzles A and C, said discharge amount control device changes [[a]] the discharge amount control value for the nozzle B if one of the discharging conditions is changed, the discharging conditions

being associated with whether a liquid is discharged from at least one of the nozzles A and C at substantially the same time as the nozzle B, a liquid is discharged from at least one of the nozzles A and C at a time so near to a discharge time of the nozzle B as to influence the discharge amount of the nozzle B, or no liquid is discharged from either of the nozzles A and C at the time near the discharge timing of the nozzle B.

10. (Currently Amended) The liquid discharge apparatus according to claim 7, wherein said discharge amount control device changes the discharge amount control value for the predetermined nozzle so as to keep the discharge amount of the predetermined nozzle unchanged when [[a]] the discharging condition for the adjacent nozzles is changed.

11. (Currently Amended) The apparatus according to claim 7, wherein when the number of nozzles of the liquid discharge head which are to be used is changed, said discharge amount control device changes a discharge amount control value for an end portion nozzle of the nozzles to be used used, which end portion nozzle is located at an end portion.

12. (Currently Amended) The apparatus according to claim 7, wherein when a combination of nozzles of the liquid discharge head which are to be used is changed, said discharge amount control device changes the discharge amount control value

for the predetermined nozzle which has undergone due to a change in a use state of the adjacent nozzles.

13. (Currently Amended) The apparatus according to claim 7, wherein when the predetermined nozzle of [[a]] the plurality of nozzles of the liquid discharge head becomes a faulty nozzle, and a combination of nozzles to be used changes as use of the predetermined nozzle is inhibited, said discharge amount control device changes discharge amount control values for the adjacent nozzles on both sides of the predetermined nozzle.

14. (Currently Amended) The apparatus according to claim 7, wherein when a discharge timing of the predetermined nozzle of a plurality of nozzles of the liquid discharge head is shifted, said discharge amount control device changes discharge amount control values for the predetermined nozzle whose discharge timing is shifted and for the adjacent nozzles on both sides of the predetermined nozzle.

15. (Currently Amended) A liquid discharge method of discharging a liquid, to a medium, from a liquid discharge head having a plurality of nozzles including a nozzle whose liquid discharge amount can be changed, comprising:

a discharge amount control step of changing a discharge amount control value including at least one of conditions [[of]] including a voltage value and a pulse width of a driving pulse to be supplied to the nozzle and a pulse width in accordance with a change in at least one of conditions [[of]] including a combination of nozzles to be used,

the number of nozzles to be used, presence/absence of a faulty nozzle, a direction of relative movement of the head and the medium, and a speed of the relative movement of the head and the medium.

16. (Currently Amended) The method according to claim [[3]] 6,
wherein

the medium substrate has a pixel area partitioned by a black matrix,
the liquid discharge head discharges ink from the nozzle nozzles, and
a color filter is manufactured by discharging ink from the liquid discharge head to the pixel area on the medium substrate.

17. (Currently Amended) The method according to claim [[3]] 6,
wherein

the medium substrate has a pixel area serving as a light-emitting portion,
the liquid discharge head discharges an electroluminescence material from the nozzle nozzles, and

an electroluminescence device is manufactured by discharging [[an]] the electroluminescence material from the liquid discharge head to the pixel area on the medium substrate.

18. (Currently Amended) The method according to claim [[3]] 6,
wherein

the medium substrate has an area serving as a conductive thin film portion,
the liquid discharge head discharges a conductive thin film material from
the nozzle nozzles, and

an electron-emitting device having the conductive thin film portion is
manufactured by discharging [[a]] the conductive thin film material from the liquid
discharge head to the area on the medium substrate.

19. (Currently Amended) The method according to claim [[3]] 6,
wherein

the medium substrate has areas serving as conductive thin film portions,
the liquid discharge head discharges a conductive thin film material from
the nozzle nozzles, and
a display panel including a plurality of electron-emitting devices having the
conductive thin film portions is manufactured by discharging [[a]] the conductive thin film
material from the liquid discharge head to the areas on the medium substrate.

20. (Currently Amended) A display device panel manufacturing method
of manufacturing a display device panel by discharging a liquid, to a substrate, from a
liquid discharge head having a plurality of nozzles including a nozzle whose liquid
discharge amount can be changed, comprising:

a step of changing a discharge amount control value including at least one of
conditions [[of]] including a voltage value and a pulse width of a driving pulse to be

supplied to the nozzle ~~and a pulse width~~ in accordance with a change in at least one of conditions [[of]] including a combination of nozzles to be used, the number of nozzles to be used, presence/absence of a faulty nozzle, a direction of relative movement of the head and the medium, and a speed of the relative movement of the head and the medium.

21. (Currently Amended) The method according to claim [[6]] 20, wherein the display device panel comprises a color filter.

22. (Currently Amended) The method according to claim [[6]] 20, wherein the display device panel comprises an electroluminescence device.

23. (Currently Amended) The method according to claim [[6]] 20, wherein the display device panel comprises a display panel including a plurality of electron-emitting devices having thin conductive film portions.